

## **ABSTRACT OF THE DISCLOSURE**

A method for using ammonium fluoride solution in a photoelectrochemical etching process of a silicon wafer, comprising steps of: placing a wafer after the  
5 pre-etching process into an alcohol solution for activating the surface of wafer  
and into an ammonium fluoride solution as an etching solution; and  
illuminating the back of wafer with a halogen light and performing a  
photoelectrochemical etching process in a potentiostatic.